IN THE UNITED STATES
PATENT AND TRADEMARK OFFICE

Appl. No. : 10/628,942

Applicant(s) : van GORKOM

Filed : 7/29/2003

Confirmation No. : 9092

TC/A.U. : 2676

Examiner : MONESTIME, Mackly

Atty. Docket : N-16984A

Title: DISPLAY DEVICE COMPRISING A LIGHT GUIDE

Mail Stop: APPEAL BRIEF - PATENTS
Commissioner for Patents
Alexandria, VA 22313-1450

REPLY BRIEF UNDER 37 CFR 41.41

Sir:

This is a Reply Brief in response to the Examiner's answer dated 22 November 2006 in the subject application.

RESTATEMENT OF GROUNDS OF REJECTION

Claims 19 and 21 stand rejected under 35 U.S.C. 102(b) over Stern (USP 5,771,321).

Claims 1, 3, 5, 10-11, 13-15, and 22 stand rejected under 35 U.S.C. 103(a) over Stern.

Claims 2, 4, 8-9, 12, 16-18, and 20 stand rejected under 35 U.S.C. 103(a) over Stern and Adachi et al. (USP 5,631,664, hereinafter Adachi).

REMARKS REGARDING EXAMINER' ANSWER

Claim 1 claims a display device that includes a light guide and a movable element, wherein the movable element is situated in an evacuated space below 0.1 atmosphere.

The Examiner's Answer asserts: "Since this space is extremely small and as such the pressure would obviously be very low" (Examiner's Answer, page 8, last paragraph). The applicant respectfully disagrees with this assertion.

As is well known to one of skill in the art, the size of a space is independent of the pressure within the space. A small space can be pressurized to high pressures, or evacuated to low pressures, regardless of the size of the space.

Additionally, Stern specifically teaches providing holes in a movable element (a 'tap beam') to equalize the pressure in the space above and below the tap beam of a display device:

> "These holes provide two functions... [they] provide an escape route for any air trapped between a tap beam and either the light storage plate or the viewing substrate as the tap beam is actuated toward the plate or substrate." (Stern, column 41, lines 36-41.)

The applicant respectfully maintains that creating holes that provide an escape route for air trapped in the space argues against the Examiner's assertion that Stern teaches that "the movable element is situated in an evacuated space below 0.1 atmosphere", as specifically claimed in claim 1.

Claim 2 claims a display device that includes a light guide and a movable element, wherein the selection means comprise transparent electrodes and, in operation, the movable element contacts the light guide at the location of an electrode, thus causing light to be emitted through the transparent electrode.

The applicant respectfully maintains that there is no suggestion in the prior art to combine Stern and Adachi, and that even if these references are combined, the combination fails to teach each of the elements of claim 1.

Stern specifically teaches gaps in the electrodes at the location of contact between the movable element and the light guide (see FIG. 5, below; electrodes 47).

Adachi teaches a display that uses transparent electrodes in a different technology (ferroelectric).

The Examiner's Answer acknowledges that "so long as [creating the combination] takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper". The Examiner fails to show why one of ordinary skill in the art would be lead by a display that uses mechanical contacts and a display that uses ferroelectric inversion to create a display that includes transparent electrodes and a movable element that contacts a light guide at the location of the electrode.

The applicant notes that the final Office action states that the motivation to combine these references is "so that the transparent electrodes can be placed on the surface of the movable element at the light emitted portion without blocking the light." The applicant maintains that this motivation is gleaned from the applicant's disclosure, because neither Stern nor Adachi suggests that the transparent electrodes can be placed on the surface of the movable element at the light emitted portion without blocking the light.

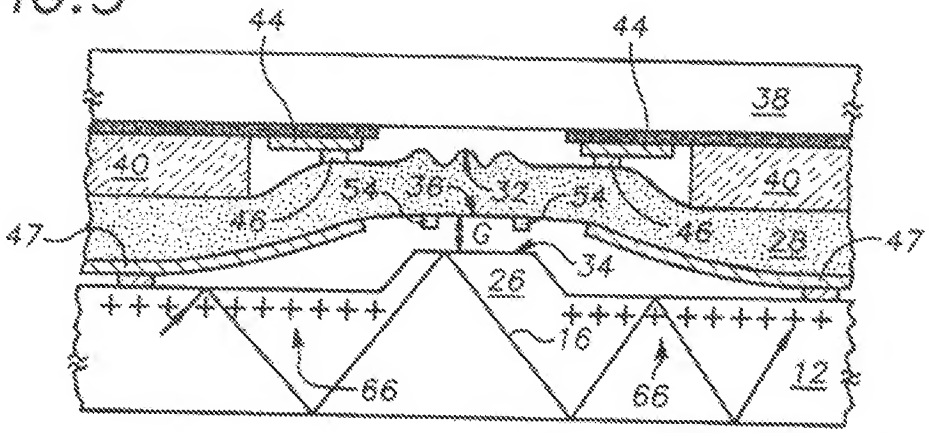
Additionally, assuming in argument that one of ordinary skill in the art would replace Stern's opaque electrodes with Adachi's transparent electrodes, the applicant respectfully maintains that this combination will not produce a movable element that contacts the light guide at the location of an electrode, because Stern specifically teaches contacting the light guide at locations that do not include the electrodes.

Claim 19, upon which claim 21 depends, claims a display device that includes a light guide and a movable element, wherein the movable element or the light guide is provided with an anti-adhesion layer on the side at which the contact is made between the movable element and the light guide.

The Examiner maintains that Stern's layer 66 corresponds to the claimed anti-adhesion layer (Examiner's Answer, page 7, last line - page 8, line 5). The applicant respectfully disagrees.

Stern's FIG. 5 is illustrated below:

FIG. 5



Substrate 12 is a lightguide, and layer 28 is a movable element; when layer 28 is brought in optical contact with lightguide 12, light from the lightguide is transmitted through the device. Stern teaches:

> "the embedded electret [66] produces corresponding attractive image charge in the tap beam electrode 47, resulting in a constant electrostatic downward force on the tap beam, holding the beam in contact with the top surface 34 of the light storage plate mesa 26." (Stern, column 13, lines 38-42.)

The applicant respectfully maintains that a layer 66 that is specifically designed to hold the flexible member in contact with the light guide cannot be said to correspond to "an anti-adhesion layer on the side at which the contact is made between the movable element and the light guide" as specifically claimed in claim 19.

At the above cited text, the Examiner states: "the attractive electret on the layer 66 cause the tap beam to be removed from the viewing substrate stand-offs 46, i.e. cause the tap beam to not adhere or stick to the viewing substrate stand-offs 46". The applicant respectfully maintains that this interpretation is not consistent with Stern's teaching. The Examiner's position is that the adhesive forces between light guide 12 and the movable element 28 constitute an anti-adhesive force relative to a layer opposite to the light guide. The Examiner's assertion renders the term "anti-adhesion" meaningless, because an attractive force in one direction can always be termed a repulsive force in the opposite direction.

The applicant respectfully maintains that terms in a claim must be interpreted in view of the applicant's specification, and in view of how the term is generally used in the art. One of ordinary skill in the art would not interpret Stern's electret layer 66 that is designed to hold the flexible member to the light guide as an "anti-adhesion" layer.

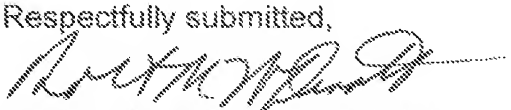
CONCLUSIONS

Because Stern fails to teach or suggest a movable element that is situated in an evacuated space below 0.1 atmosphere, and because the Examiner's assertion that small spaces necessarily imply very low pressure is erroneous, the applicant respectfully requests that the Examiner's rejection of claims 1, 3, 5, 10-11, and 13-15 under 35 U.S.C. 103(a) over Stern be reversed by the Board, and the claims be allowed to pass to issue.

Because neither Stern nor Adachi teaches a movable element with a transparent electrode at a point of contact with a light source, and because Stern specifically teaches opaque electrodes at the periphery of the contact point with the light source, the applicant respectfully requests that the Examiner's rejection of claims 2, 4, 8-9, 12, 16-18, and 20 under 35 U.S.C. 103(a) over Stern be reversed by the Board, and the claims be allowed to pass to issue.

Because Stern fails to teach an anti-adhesion layer between the movable element and the light source, the applicant respectfully requests that the Examiner's rejection of claims 19 and 21 under 35 U.S.C. 102(b) over Stern be reversed by the Board, and the claims be allowed to pass to issue.

Respectfully submitted,



Robert M. McDermott, Attorney
Registration Number 41,508
804-493-0707